

REMARKS

Claims 1-18 are pending. Claims 1,4,10-11,14 and 18 have been amended. The specification has been amended to for purposes of clarification and to correspond with the claim amendments submitted above.

The Applicants would like to thank the Examiner for indicating that claims 7-8 contain allowable subject matter. The Applicants would like to reserve the right to rewrite the claims pending further prosecution and allowance of the case.

Claims 1-6 and 9-18 are rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Hiyama et al. (U.S. Patent No. 6,269,379) in view of Vaithilingam et al. (U.S. Patent No. 6,411,724). Applicants respectfully traverse the rejection.

An image data retrieval result is delivered to various clients. These clients may be formed of various terminals such as a personal computer, a portable telephone, a portable information terminal, a digital television, and other such devices. A user can use an image retrieving and delivering system through one of the clients. The client-side terminals can access networks that are different from each other. More particularly, Claim 1 of the present invention recites an image retrieving and downloading system comprising a data base for registering an image including a

time-varying picture or a static picture with a feature descriptor or a plurality of feature descriptors of the image. An image retrieving means retrieves the feature descriptor or the feature descriptors registered in the data base according to a retrieval condition input by a user and obtaining a retrieval result satisfying the retrieval condition. Contents additional service means for editing and processing the retrieval result according to a download condition obtained from a user terminal side on which the retrieval result is to be received.

Hiyama et al. discloses a medical image filing system enabling registration and retrieval of a plurality of medical images. In Hiyama, a normal image or color view image is halved by using the mouse or the Keyboard to produce a reduced image. The reduced image is then displayed on the viewing monitor (see column 12, lines 48-49, lines 55-60). The reduced images appearing on the viewing monitor can be returned to normal images by using the mouse or keyboard (see column 12, lines 61-64). Therefore, the change from normal images to reduced images is performed according to an instruction provided by a user. Similarly, the change from reduced images to normal images is performed according to an instruction provided by a user. Therefore, the judgment of the user is needed each time an image is processed and displayed.

In contrast, in the present invention according to claims 1 and 11, the retrieval result is edited and processed according to a download condition obtained from a user terminal by the contents additional service means. Further, in accordance with claims 2 and 12, the download condition denotes terminal information of the user terminal. Therefore, as described in the specification with regard to Fig. 5(a) and Fig. 5(b), image data can be transmitted according to the terminal information provided to a personal computer in which a processing capability of an image display is sufficient. Further, image data composed of data relating to a fish and link information to an image of the fish can be transmitted, according to the terminal information, to a portable telephone in which a display area is small or a functional burden is high when many pieces of information are downloaded.

Moreover, Hiyama et al. does not teach or suggest the use of a "plurality of feature descriptors" in conjunction with the other features as claimed by the Applicants. On page 2 of the Office Action, paragraph 2, the Examiner applies column 6, lines 24-27 of Hiyama et al. which states that "The hard disk interface 48 reads programs to be run by the CPU 41 and **image data** representing a menu screen of the retrieval monitor 44 from the hard disk 47, places the read programs and image data in the work memory 49. The work memory

49 stores the programs and **image data** for the retrieval monitor 44."
(emphasis added).

The Examiner then asserts that the Applicants' feature "descriptor of the image" reads on Hiyama et al.'s "image data." The Applicants respectfully submit that this is not an accurate characterization of the reference. As described on page 15, lines 17-22 of the Applicants' specification: "... when the input image is received, an image processing is performed for the input image to extract a feature degree from the input image (step ST2). Here, a color, a texture, a motion or a shape in the input image is, for example, extracted as a feature degree." Hiyama et al. simply teaches the generic reading and storing of image data and does not teach or suggest the use of feature descriptors as claimed by the Applicants.

Furthermore, Hiyama et al. fails to disclose a contents additional service means for editing and processing the retrieval result according to a download condition obtained from a user terminal side on which the retrieval result is to be received. As described in more detail on page 18, lines 10-25 of the specification, in the contents additional service unit, when the terminal information of the user is received "the judgment whether or not the reception of the image data of the retrieval result

obtained in the step ST13 is possible in the user terminal is performed to perform a processing for transmitting the image data of the of the retrieval result to the user terminal by proceeding the procedure to a step ST17 in cases where the reception is possible and to perform a processing for converting the image data of the retrieval result by proceeding the procedure to a step ST16 in cases where the reception is impossible (step ST15). As is described above, the terminal information of the user terminal is used as a delivery condition for delivering the retrieval result." Hiyama et al. in no way teaches or suggests the "contents additional service means for editing and processing the retrieval result according to a download condition obtained from a user terminal side on which the retrieval result is to be received."

The Examiner applies the portion of Hiyama et al. where "Editing of patient data or examination data is initiated, as shown in FIG. 14, by retrieving image files as described in conjunction with FIG. 9 at step S72." The decision blocks in Figure 9 are S63, S64 and S65. They ask the following questions: is the number of selected image files 1, 2 or 3? Depending upon the outcome of these queries, reduced images are displayed contained in one, two, or three image files (S66, S67 and S68). Figure 14, S72 simply displays a reduced image.

Again, there is no teaching or suggestion of "contents additional service means for editing and processing the retrieval result according to a download condition obtained from a user terminal side on which the retrieval result is to be received."

Furthermore, in regard to claims 10 and 18 of the present invention, the reception of the retrieval result is determined according to a feature descriptor or a plurality of feature descriptors of the image. The feature descriptor(s) denote a feature or a plurality of feature descriptors of the image, and the feature descriptor(s) differ from the image. This description of the present invention is not described in Hiyama. In fact in Hiyama the CPU checks if image reproduction terminates (see column 8, lines 44-45), which is contrary to the present invention.

For at least the above mentioned reasons, the Applicants respectfully request that the rejection be withdrawn and that independent claims 1, 10, 11 and 18 be allowed. Each claim being related to similar subject matter and are therefore allowable for reasons similar to those given above for each claim.

In regard to dependent claims 6 and 16, a retrieval result is edited and processed and transmitted to the user terminal (for example, a portable telephone in which a display area is small or a functional burden is high when many pieces of information are

downloaded) according to the terminal information of the user terminal, and the retrieval result which is not edited or processed is transmitted to another terminal specified by the user. For example, a personal computer in which a processing capability of an image display is sufficient. Therefore, the retrieval result can be transmitted while considering the processing capability of each terminal.

The remaining dependent claims are allowable at least by virtue of their dependency on the above-identified independent claims. See MPEP § 2143.01. Moreover, these claims recite additional subject matter, which is not suggested by the documents taken alone or in combination. For at least these reasons, it is respectfully submitted that all pending claims are in condition for allowance.

Entry of the above amendments is earnestly solicited. An early and favorable first action on the merits is earnestly solicited.

Attached hereto is a marked-up version of the changes made to the application by this Amendment.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Michael K. Mutter (Reg. 29,680) at the telephone number of the undersigned below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Specification:

Please replace the paragraph beginning on page 3, line 29, with the following rewritten paragraph:

SUMMARY OF THE INVENTION

--The present invention is provided to solve the above problem, and an object of the present invention is to obtain an image retrieving and downloading system and an image retrieving and downloading method in which image data obtained as a retrieval result is downloaded in a format corresponding to a processing capability of each terminal (for example, a portable telephone, a visual telephone, a personal computer or the like) to the terminal through one of various types of networks such as a radio type network.

An image retrieving and downloading system according to the present invention comprises a data base for registering ~~each of a plurality of images~~ an image including a time-varying picture ~~and or~~ a static picture with a feature descriptor or a plurality of feature descriptors of the image, image retrieving means for retrieving ~~one~~ the feature descriptor or the feature descriptors registered in the data base according to a retrieval condition

input by a user and obtaining a retrieval result satisfying the retrieval condition, and contents additional service means for editing and processing the retrieval result according to a download condition obtained from a user terminal side on which the retrieval result is to be received. Therefore, because an output form of the retrieval result and a format of an output image are edited and processed according to the download condition of the user terminal side, the retrieval result can be easily displayed in each of various types of terminals having processing capabilities different from each other.

In an image retrieving and downloading system according to the present invention, the contents additional service means comprises terminal information obtaining means for obtaining terminal information of the user terminal as the download condition. Therefore, because an output form of the retrieval result and a format of an output image are edited and processed according to a processing capability of the user terminal, the retrieval result can be easily displayed in each of various types of terminals having processing capabilities different from each other.

In an image retrieving and downloading system according to the present invention, the contents additional service means produces data, which relates to the retrieval result and of which the

reception in the user terminal is possible, according to the download condition specified by the user and transmits the data to the user terminal before the transmission of the retrieval result. Therefore, the user can easily retrieve a desired image from images of various kinds of retrieval results.

An image retrieving and downloading system according to the present invention further comprises contents description meta-data producing means for extracting a feature degree of each of a plurality of input images and format information of the input image and producing the a feature descriptor or a plurality of feature descriptors of each input image, and data storing unit for registering each the feature descriptor or the feature descriptors produced by the contents description meta-data producing means and the input image relating to the feature descriptor or the feature descriptors in the data base. Therefore, the data base having the feature descriptor or the feature descriptors which can be easily compared with the download condition can be obtained from each of various types of terminals having processing capabilities different from each other.

In an image retrieving and downloading system according to the present invention, the contents additional service means comprises converting means for converting an image format and an output

format in the image of the retrieval result into those suitable for the terminal information of the user terminal, filtering means for performing no transmission of the retrieval result which does not suit the terminal information, or replacing means for replacing the retrieval result not suitable for the terminal information with substitutive data suitable for the terminal information. Therefore, the retrieval result can be easily displayed in each of various types of terminals having processing capabilities different from each other.

In an image retrieving and downloading system according to the present invention, the contents additional service means transmits the retrieval result, which is not edited or processed, to another terminal specified by the user in advance when the retrieval result is edited and processed according to the terminal information of the user terminal. Therefore, the retrieval result can be easily displayed in each of various types of terminals having processing capabilities different from each other.

In an image retrieving and downloading system according to the present invention, the contents additional service means comprises a plurality of editing means for respectively editing and processing the retrieval result not suitable for the terminal information of the user terminal, and the plurality of editing

means are properly selectable in one of an image retrieval requiring side, an image retrieval performing side and a contents providing side on which the images are registered in the data base. Therefore, the retrieval can be performed while reflecting an intention of the image retrieval requiring side, the image retrieval performing side or the contents providing side.

In an image retrieving and downloading system according to the present invention, the image format includes at least one of a sign format of the image of the retrieval result, a bit rate, a frame rate, a resolution degree and a file size. Therefore, the retrieval result can be easily displayed in each of various types of terminals having processing capabilities different from each other.

In an image retrieving and downloading system according to the present invention, the contents additional service means produces the data, which relates to the retrieval result and of which the reception in the user terminal is possible, according to copyright information and/or a distribution condition of the image of the retrieval result. Therefore, the user can easily retrieve a desired image from images of various kinds of retrieval results.

An image retrieving and downloading system according to the present invention comprises a data base for registering ~~each of a plurality of images~~ an image including a time-varying picture and

or a static picture with a feature descriptor or a plurality of feature descriptors of the image, image retrieving means for retrieving ~~one~~ the feature descriptor or the feature descriptors registered in the data base according to a retrieval condition input by a user and obtaining a retrieval result satisfying the retrieval condition, output control means for transmitting the retrieval result and the feature descriptor or the feature descriptors relating to the retrieval result to a user terminal, and contents description meta-data analyzing means, arranged in the user terminal, for analyzing the feature descriptor or the feature descriptors transmitted from the output control means and determining whether or not the retrieval result is to be received. Therefore, because the user can distinguish the retrieval result by analyzing the feature of the image of the retrieval result and meta-data describing a format of the image, the retrieval result can be easily displayed in each of various types of terminals having processing capabilities different from each other.

An image retrieving and downloading method according to the present invention comprises an image retrieving step of retrieving a feature descriptor or a plurality of feature descriptors of an image registered in a data base according to a retrieval condition input by a user and obtaining a retrieval result satisfying the

retrieval condition, and a contents additional service step of editing and processing the retrieval result according to a download condition obtained from a user terminal side on which the retrieval result is to be received. Therefore, because an output form of the retrieval result and a format of an output image are edited and processed according to the download condition of the user terminal side, the retrieval result can be easily displayed in each of various types of terminals having processing capabilities different from each other.

In an image retrieving and downloading method according to the present invention, the contents additional service step includes a step of obtaining terminal information of the user terminal as the download condition. Therefore, because an output format of the retrieval result and a format of an output image are edited and processed according to a processing capability of the user terminal, the retrieval result can be easily displayed in each of various types of terminals having processing capabilities different from each other.

In an image retrieving and downloading method according to the present invention, the contents additional service step includes a step of producing data, which relates to the retrieval result and of which the reception in the user terminal is possible, according

to the download condition specified by the user and a step of transmitting the data to the user terminal before the transmission of the retrieval result. Therefore, the user can easily retrieve a desired image from images of various kinds of retrieval results.

An image retrieving and downloading method according to the present invention further comprises a contents description meta-data producing step of extracting a feature degree of the image and format information of the image when the image is input and producing the feature descriptor or the feature descriptors, and a data storing step of registering the feature descriptor or the feature descriptors, produced in the contents description meta-data producing step and the input image in the data base. Therefore, a data base having the feature descriptor or the feature descriptors which can be easily compared with the download condition can be obtained from each of various types of terminals having processing capabilities different from each other.

In an image retrieving and downloading method according to the present invention, the contents additional service step includes at least one of a converting step of converting an image format and an output format in the image of the retrieval result into those suitable for the terminal information of the user terminal, a filtering step of performing no transmission of the retrieval

result which does not suit the terminal information, and a replacing step of replacing the retrieval result not suitable for the terminal information with substitutive data suitable for the terminal information. Therefore, the retrieval result can be easily displayed in each of various types of terminals having processing capabilities different from each other.

In an image retrieving and downloading method according to the present invention, the contents additional service step includes a step of transmitting the retrieval result, which is not edited or processed, to another terminal specified by the user in advance when the retrieval result is edited and processed according to the terminal information of the user terminal. Therefore, the retrieval can be performed while reflecting an intention of the image retrieval requiring side, the image retrieval performing side or the contents providing side.

In an image retrieving and downloading method according to the present invention, the contents additional service step includes a step of producing the data, which relates to the retrieval result and of which the reception in the user terminal is possible, according to copyright information and/or a distribution condition of the image of the retrieval result. Therefore, the user can

easily retrieve a desired image from images of various kinds of retrieval results.

An image retrieving and downloading method according to the present invention comprises an image retrieving step of retrieving a feature descriptor or a plurality of feature descriptors of an image registered in a data base according to a retrieval condition input by a user and obtaining a retrieval result satisfying the retrieval condition, an output control step of transmitting the retrieval result and the feature descriptor or the feature descriptors relating to the retrieval result to a user terminal, and a contents description meta-data analyzing step of analyzing the feature descriptor or the feature descriptors transmitted in the output control step and determining on the user terminal side whether or not the retrieval result is to be received. Therefore, because the user can distinguish the retrieval result by analyzing the feature of the image of the retrieval result and meta-data describing a format of the image, the retrieval result can be easily displayed in each of various types of terminals having processing capabilities different from each other.--

In the Claims:

The claims have been amended as follows:

1. (Amended) An image retrieving and downloading system,
comprising:

a data base for registering ~~each of a plurality of images~~ an
image including a moving picture ~~and~~ or a static picture with a
feature descriptor or a plurality of feature descriptors of the
image;

image retrieving means for retrieving ~~one~~ the feature
descriptor or the feature descriptors registered in the data base
according to a retrieval condition input by a user and obtaining a
retrieval result satisfying the retrieval condition; and

contents additional service means for editing and processing
the retrieval result according to a download condition obtained
from a user terminal side on which the retrieval result is to be
received.

4. (Amended) An image retrieving and downloading system
according to claim 1, further comprising:

contents description meta-data producing means for extracting
a feature degree of each of a plurality of input images and format
information of the input image and producing ~~the~~ a feature

descriptor or a plurality of feature descriptors of each input image; and

data storing unit for registering ~~each~~ the feature descriptor or feature descriptors produced by the contents description meta-data producing means and the input image relating to the feature descriptor or the feature descriptors in the data base.

10. (Amended) An image retrieving and downloading system, comprising:

a data base for registering ~~each of a plurality of images~~ an image including a time-varying picture ~~and~~ or a static picture with a feature descriptor or a plurality of feature descriptors of the image;

image retrieving means for retrieving ~~one~~ the feature descriptor or the feature descriptors registered in the data base according to a retrieval condition input by a user and obtaining a retrieval result satisfying the retrieval condition;

output control means for transmitting the retrieval result and the feature descriptor or the feature descriptors relating to the retrieval result to a user terminal; and

contents description meta-data analyzing means, arranged in the user terminal, for analyzing the feature descriptor or the

feature descriptors transmitted from the output control means and determining whether or not the retrieval result is to be received.

11. (Amended) An image retrieving and downloading method, comprising:

an image retrieving step of retrieving a feature descriptor or a plurality of feature descriptors of an image registered in a data base according to a retrieval condition input by a user and obtaining a retrieval result satisfying the retrieval condition; and

a contents additional service step of editing and processing the retrieval result according to a download condition obtained from a user terminal side on which the retrieval result is to be received.

14. (Amended) An image retrieving and downloading method according to claim 11, further comprising:

a contents description meta-data producing step of extracting a feature degree of the image and format information of the image when the image is input and producing the feature descriptor or the feature descriptors; and

a data storing step of registering the feature descriptor or the feature descriptors produced in the contents description meta-data producing step and the input image in the data base.

18. (Amended) An image retrieving and downloading method, comprising:

an image retrieving step of retrieving a feature descriptor or a plurality of feature descriptors of an image registered in a data base according to a retrieval condition input by a user and obtaining a retrieval result satisfying the retrieval condition;

an output control step of transmitting the retrieval result and the feature descriptor or the feature descriptors relating to the retrieval result to a user terminal; and

a contents description meta-data analyzing step of analyzing the feature descriptor or the feature descriptors transmitted in the output control step and determining on the user terminal side whether or not the retrieval result is to be received.